FOOD SAVING AND SHARING


HUNGER MAP of EUROPE
Famine Conditions
Food Shortage approaching Famine Point
Serious Food Shortage
Sufficient Present Food Supply But Future Serious
Peoples already receiving American aid
Unclassified
DECEMBER 1, 1918
America's food pledge 20 million tons
NORWAY
SWEDEN
FINLAND
RUSSIA
SIBERIA
BALTIC SEA
ENGLAND
GERMANY
POLAND
UKRAINE
CZECHO-SLOVAKIA
AUSTRIA-HUNGARY
FRANCE
JUGO-SLAVONIA
ITALY
SPAIN
PORTUGAL
BULGARIA
BLACK SEA
CASPIAN SEA
ARMENIA
TURKEY
MEDITERRANEAN SEA
AFRICA
AFRICAN GULF

FOOD SAVING AND SHARING

Telling How the Older Children of America May Help Save - from Famine - Their Comrades in Allied Lands Across the Sea

Prepared under the direction of
THE UNITED STATES FOOD ADMINISTRATION
in coöperation with
THE UNITED STATES DEPARTMENT OF AGRICULTURE AND THE BUREAU OF EDUCATION

GARDEN CITY NEW YORK
DOUBLEDAY, PAGE & COMPANY
1918

FOREWORD

The National Education Association, at its annual meeting, July, 1918, adopted a resolution calling upon the United States Food Administration to "prepare in a form suitable for use in public schools, and particularly in the upper grades, lessons and material supplementary to existing courses, which will promote the program of food conservation."

In response to this request this little book has been prepared. It was written by Eva March Tappan, assisted by Alice Peloubet Norton, editor of the Journal of Home Economics; Henrietta W. Calvin, Specialist in Home Economics, Bureau of Education; C. F. Langworthy, Chief of the Office of Home Economics, Department of Agriculture; and Sarah Louise Arnold, Dean of Simmons College. It has been read and approved by H. C. Sherman, Professor of Food Chemistry, Columbia University.

The manner in which the book can be used most advantageously will be determined by the teacher and by local conditions. It is believed that the information contained in it may properly be included in the instruction of American children at the present time. This information will enable the children to contribute intelligently to the success of the government food cam-

paign, and thus aid greatly in the relief of the millions now dependent for their food upon the good will of the people of America.

The United States Food Administration is grateful to the teachers for their loyal coöperation.

OLIN TEMPLIN
Director of School and College Activities

November 1, 1918.

To the Girls and Boys of America:

Now that the terrible war is over, you must be glad that you helped to win it by saving food for our soldiers and our unhappy friends across the sea. But our work of feeding hungry people is now to be greater than it has ever been. Many millions of people have been made free by our victory, but they are in the greatest danger of death from starvation. They look to America for food until the next harvest.

We must go on saving and sharing with them as faithfully as ever. And of course you will want to do your part as you have been doing it. To save the world from famine will be a greater task than any of us can imagine, but we can do it if each of us does all he can. I am counting on you.

Faithfully yours,

HERBERT HOOVER.

GRACE AT TABLE

1918

Here we gather, dear All-Father,
Round Thy table to be fed.
'Tis Thy gift, — our daily bread.

As we gather to be fed
Nations plead for daily bread,—
Fighting son and anguished mother,
Orphaned children,— all together
Pray to thee for daily bread.
At Thy common table, Father,
Ask we all for daily bread.

God, All-Father, hear our prayer!
Move our hearts and minds to share
With Thy children at Thy table
This, Thy gift of daily bread,—
Sacred gift of daily bread!

Lest they perish, swift and eager
Share we now our daily bread.
Give through us, O great All-Father,
To Thy children, daily bread!

SARAH LOUISE ARNOLD

CONTENTS

prove your Americanism by eating less

CHAPTER I

FOOD SAVING AND SHARING

Not long after the outbreak of the war, it became clear that unless the Allies and the neutral countries could get food from North America, they would soon find themselves hungry. We were glad to send food. We put wheat substitutes in our bread; we ate less sugar than usual; and we kept meatless days—all in order to save food to send across the ocean.

The war is over, but the coming of peace does not fill the empty plates of the hungry people of Europe. For some time to come, this must be chiefly the work of North America. We must do more than in the time of war because there are so many more people to feed. We must help not only the Allies but also the starving nations that we could not reach until they had been freed from the German invaders. It is not the American way to leave any people to die of starvation. We must do our share, and a generous share. We shall

probably have to eat less than we are accustomed to of some of the things that we like, and we shall have to be careful not to be wasteful.

Some of us have fallen into the habit of being careless and extravagant in the matter of food. Compared with the states of Europe, the United States is a young country, and the food history of all young countries is much the same. When colonists first come to a land, they usually find it for a time somewhat difficult to get food, excepting wild meat. Before long matters improve. The soil of a new land is rich and fertile, and soon food of many kinds becomes plentiful. Naturally, those who have not had all that they wished now enjoy the abundance, and take great pleasure in loading their tables with all sorts of delicacies.

That is the way it has been with this country. But even before the war, people were beginning to find out that this fashion of living was foolish and extravagant, that preparing so many kinds of food in elaborate ways was a great waste of time and material, and that an overloaded table was in poor taste. In short, people were beginning to think more wisely about their food.

When we began to send large quantities of food to Europe, we had to look at food in a new and different fashion. We had been in the habit of choosing whatever we liked, provided it did not cost more than we could pay. We now learned that we ought rather to choose what we needed for health and strength.

We had to send the amount of food that we could

A Bread Line in Europe

safely spare. We had to send the food that could best be shipped, and the kind that soldiers would like. No loyal American was so selfish as to keep the best of the foods for himself, and send the poorest and least appetizing to the Allies and to our own boys on the front who were risking their lives for us. An American boy wrote home, "When I think that the food I eat in the trenches was brought to me more than 4,000 miles by land and sea, part of the way on new roads built by the United States, that her bread has followed me wherever I have been, I cannot tell you how proud I feel that I am an American." To supply food to those who fight our battles is a noble task, but a nobler lies before us. To-day, millions of people have not sufficient food to keep them in health. We must eat wisely and economically. We must save and share.

The world is large. It produces a vast amount of food, but there is also a vast number of people to eat this food. We never have much food stored up "against a rainy day." Even in time of peace, if all production of food should suddenly cease, the whole stock would be gone in sixty days. The world really lives from hand to mouth. The four years of war have lessened production in many places and destroyed many fields. There is much less food in the world than usual, and if people are not to go hungry, no one must be wasteful. The whole world is like one vast family, seated at one common table. There is only a certain quantity of food, and if some people take too much,

others will have to take less or go without entirely. This vast family is scattered over the world. The food which they need is also scattered over the world. Did you ever think how well arranged it is that we have different zones and that when the North Temperate Zone, for instance, is warmest, the South Temperate is coldest, so that the autumn of one is the spring of another? Even in places no farther apart than Idaho and Missouri, there is considerable difference in the time of harvest, so that the season for producing grain is lengthened and a greater amount of necessary food is brought into the world. In time of peace, trade and opportunity to make money by carrying products from where they grow to the places where they do not grow may generally be depended upon for the distribution of food. That is why people in New England or Michigan, for instance, can have early in the season peaches from Georgia, then from Delaware and New Jersey, and finally from their home orchards.

In time of war and for a long while after such a war as we have just passed through, it is not enough to raise food or even to send it wherever there is a food market and it can be sold at a high price. We must remember the "common table" and realize that too much food carried to one place will leave too little for other places. Transportation is disorganized; it is easier to send to one part of the world or to one part of a country than to another. People must not use food wastefully or too lavishly, and then have to go without

later. In short, everyone, in order to do his proper share of the work of the world, must have his proper share of the food of the world. To increase the production of food and to distribute it fairly needs a wise brain and a strong hand. This is why every one of the countries that were at war has needed a Food Administration, and why even with the coming of peace there will continue a need for careful economy in food. Representatives of these countries have held conferences, so this plan is really a world arrangement to provide for a world table.

We did not go into this war because we were eager to kill people, but because we were eager to save people, to give freedom to those in bondage, and to make the world a safe and happy place in which to live. We have helped our friends, and we must continue to help them. We must also see to it that those who have been our enemies are enabled to help themselves.

This little book was written to tell, first, what we did during the war to make sure that our own people and the Allies had their proper share of food; and, second, what we have yet to do as our share in providing food for the common table. Before we can understand this, however, we must know what kinds of food each person needs to make him ready to do his work in the world. That is why the book is divided into two parts, namely:

1. The value of different kinds of food.

2. What the United States did to provide food for ourselves and the Allies.

It is worth remembering:

That people are thinking more wisely about food.

That we must choose our food for health and strength.

That the whole world sits at a common table, and food should be shared fairly.

That in peace, trade is the great agent of food distribution.

That in war only a strong Food Administration can make sure that all are treated fairly.

That to feed people wisely we must know the value of the different kinds of food.

War Orphans of Europe Enjoying a Meal Furnished by the American Red Cross

CHAPTER II

FOOD IN GENERAL

Not many years ago, if the question had been asked, "What kinds of food ought one to eat?" most people would have looked a little surprised and replied, "Whatever you like, if it does not make you sick." People in general thought of food as something that tasted good and made them feel more comfortable when they were hungry. Very few realized that different kinds of food served different purposes, and the mistake was often made of using too little or too much of some one kind. This was just about as reasonable as it would be to buy two hats when you had no shoes, or to go without underwear for the sake of a new coat.

We are learning that our food is useful to us in three ways. The first is to give us energy for work and to keep us warm. When a room is cold, we make a fire. The burning of the coal or wood produces heat. If the

fire were under the boiler of an engine, it would turn the water into steam that would furnish the power to run the engine. If you work hard, you need plenty of the kind of food that gives energy; for if you do not have enough food of this sort, the energy will have to come from some of the fat that is stored up in your body. Then you will become thin and lose strength. On the other hand, if you work little and eat much, you may grow too fat, or you may clog the machinery of your body and so put it out of order and make it incapable of doing good work.

The second way in which our food should be of use to us is as material for building up our bodies and keeping them in repair. When a man is building a house or repairing one, he needs wood or stone or brick; he needs glass and putty and nails and plaster, and many other materials. When a house is in use, something is always giving out and must be repaired. If the proper materials for repair cannot be obtained, then one part of the house after another ceases to be useful, and after a while the whole house becomes worthless. It is the same with the body. The muscles, bones, nerves, blood, and all the rest of it must have the proper sort of materials to make them grow and to keep them in good working order. We may eat entirely too much food, but if it is not of the proper sort, our bodies will become worn out and will refuse to do their work.

Besides providing fuel and materials for growth and repair, food must also act as a sort of overseer of the

machinery of the body. If you stop to think, you will realize that in your body there is a great deal of machinery. To digest your dinner, for instance, is an important business and not at all a simple matter. To carry on this business the muscles and blood vessels of the stomach and the whole digestive apparatus must be kept in good running order. Machinery needs great care. Each part must be kept in the proper position to fit into the other parts and work with them. There must be no friction, everything must work smoothly and regularly and everything must be taken to the place where it is needed. When a man sets out to repair his house, he must not only provide the proper materials, but he must see that they are set in the right places and he must see that what is useless and worn out is carried away as rubbish.

All this is the work of the food in the body, and it is high time that we began to think more wisely about it.

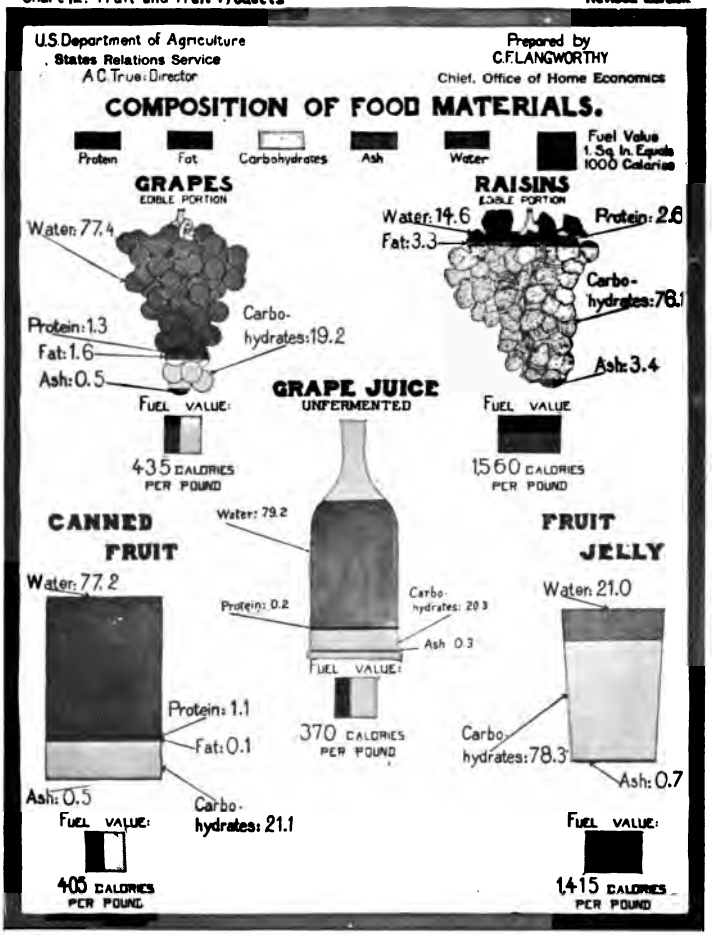
It is worth remembering:

That food is useful to us in the three following ways:

1. **Fuel food to provide power for work, and to keep us warm.**
2. **Building food to provide material for building and repairing the body.**
3. **Regulating food to keep the machinery of the body in good running order.**

Chart 12. Fruit and Fruit Products

Revised Edition



CHAPTER III

ABOUT FRUIT AND VEGETABLES

It is always interesting to visit a place where food of many kinds is for sale. People who live in the country are fortunate, for they can raise much of their own food; but they always enjoy going to the state and county fairs where food is on exhibition and prizes are given out for the biggest potatoes and pumpkins, the best bread and cake and jelly and preserves as well as for the best sheep and pigs and oxen. In the city there are often food fairs, and in the larger cities there are generally great market buildings where farmers can bring their produce, have the use of a stall, and sell directly to their customers. In many of the smaller cities the "market" consists of a great room or hall with many counters, and on these all kinds of food are placed, carefully protected by glass from dust and flies, but open to view, and with each counter given up to some one kind of food. These counters are skill-

fully arranged to induce customers to buy more than they intended, the meat and vegetables farthest from the entrance, because people will buy these anyway; and luxuries near the door, so people will be tempted by them when waiting for a car.

Such markets are arranged for the benefit of the seller; but one might be planned for the benefit of the buyer, not the buyer who merely wants "something good to eat," but the intelligent buyer who knows that each kind of food is of value for some special purpose.

Suppose there were such a market, or rather, a great food fair, larger than any fair that was ever held before, and that all the kinds of food that you ever saw were brought together so people could walk about and look and buy whatever they chose. They might find the food arranged in five great booths, so that each one contained the kinds of food that would do the same kinds of work in the body. In the first booth would be the fruits and vegetables, whose greatest value to us is in regulating the body. In the second would be milk, meat, cheese, and other foods that furnish protein, a very important building food. Milk is useful in so many other ways that it might almost be put in every booth. In the third there would be chiefly cereals, such as wheat, oats, and rye. These, too, contain protein, and they also contain much starch, the cheapest kind of body fuel. In the fourth booth would be sugar and different kinds of sweets, fuel foods that we like for their flavor. In the fifth booth would be

butter and bacon, oils, and other fats. These are important fuel foods and they also make our food taste good.

In a city small boys and girls are often sent to market to buy the food for the family. "They know what they are about," the clerks say, "and they get their money's worth." Imagine, then, some of these children with a market basket visiting each booth and selecting the day's food for their home.

At the first booth, they would find all the kinds of fruits and vegetables ever heard of. There would be apples, pears, plums, cherries, oranges, lemons, and pineapples, all the varieties of grapes that ever grew on vines and all the kinds of berries that ever grew on bushes—for in an imaginary fair like this there is no reason why there should not be fruit from every country and of every season. Of course there would also be plenty of dried fruit, such as figs, raisins, apricots, and prunes.

At the same booth, there would be vegetables of all kinds. Green corn and carrots, spinach, celery, salsify, lettuce, potatoes and sweet potatoes, onions, string beans, green peas, okra and cabbages, and all the other vegetables that ever grew in gardens or fields. There would be dried ones, too, for people are beginning to discover that they can dry vegetables as well as fruits, and if ever such a fair as this becomes a reality, there will be a great display of vegetables which will need nothing but water to make them ready to be

cooked for the table. Boxes of dried carrots or potatoes or peas do not look quite so warlike as a machine gun, but they, as well as the gun, have helped to win the war. The process of drying made it possible to preserve the products of our gardens and farms, and dried vegetables take up so little room and weigh so little that they can be carried across the ocean far more easily than fresh ones.

In these fruits and vegetables mineral matter is found, especially lime and iron. These mineral substances are necessary to all the processes going on in the body, and an important part of their work is helping to make bones and teeth. If you leave a bone in weak acid, such as vinegar, for a few days, the acid will eat most of the mineral matter out of it. The bone will look much the same, but if you take hold of it, you will find that it will bend almost like rubber and can actually be tied in a knot. This shows how bones behave if they do not have enough lime to keep them stiff. Children's bones have a hard time in one way. They have not nearly so much mineral matter as those of grown folk, and therefore they are far more likely to be bent out of shape. If a little child walks before the bones of his legs contain enough mineral matter to strengthen them so they will hold up the weight of his body, he may become bow-legged. In another way, the bones of children have a great advantage. They do not break easily, and if one does break, it will soon knit, or grow together again, while if an

elderly person breaks a bone, it may never knit at all.

Mineral matter is often found in some one part of a fruit or a vegetable more than in other parts. In the potato, for instance, there is much of it in the layer next to the skin. This is why potatoes ought to be pared as thinly as possible or the baked skin eaten. In any case, to throw away thick potato parings and buy other starch and mineral food is behaving like the woman who paid one man ten cents a barrel to carry off her old fruit baskets and wooden boxes, and on the same day paid his brother ten cents a barrel to bring her bits of wood for kindlings.

Not only do the fruits and vegetables supply us with mineral matter, but they make our food more bulky, and this is an aid to good digestion. Fruits and vegetables are useful, too, in giving us water, and we need much water, more indeed than most people are accustomed to drink. Sixty pounds of the body of a ninety-pound child consists of water. This is passing out constantly through the breath, as you can see by breathing on a cold window pane, and through the tiny pores of the skin, but more in summer than in winter; and we need a large quantity to take its place. When you are thirsty, it is not only your throat, but your whole body, that is calling for water. There is no water in sugar, starch, or lard, but there is in almost all other kinds of food, even where one would hardly think of looking for it. In wheat flour, for

example, there is a good deal. If you should keep ten pounds of wheat flour in a warm oven for a while it would weigh a little less than nine pounds when you took it out. The lost pound was water, and it has evaporated. Any one can see, even without testing the statement, that there is much water in fruit and vegetables. Grapes are nearly four-fifths water, tomatoes and celery more than nine-tenths.

It is because fruit and vegetables contain so much water that they are difficult to transport, for not only do they spoil easily, but they are heavy and take up too much room. That is one reason why, in these days, when there is double work for every ship, we are asked to eat them as much as possible, so that the more concentrated foods may be sent abroad. Entirely aside from the needs of the countries that have been at war, however, they are an extremely valuable food.

In the old fairy tales, there was always one fairy who was forgotten and who made everything go wrong because she was not invited to go to the wedding or the christening. There is a class of substances called vitamines which are somewhat like the revengeful fairy. They are present in certain kinds of food in minute quantities. Little is known about the vitamines, but what is known is of the utmost importance, for it is certain that they are necessary to life and health. There are two kinds. A good deal of one kind is found in butter, the yolk of eggs, and in the leafy vegetables, such as lettuce, spinach, and dandelions. The other

kind is found in a great many kinds of food, especially in vegetables, in fruit, and in whole cereals. Both are found in milk. They, like the fairy, should never be forgotten at the feast.

We know fairly well how much people should eat of some kinds of food; but no one has as yet found out just how much of the vitamines we need. One thing is sure, namely, that fruits and vegetables which contain them are a most valuable kind of food, and everybody, except babies, should have at least one pound a day. They are so largely water that there is very little danger of any one's eating too much of them, but in any case, it is better to eat too much of these foods than too little and the children with the market basket can hardly buy too freely at this booth.

It is worth remembering:

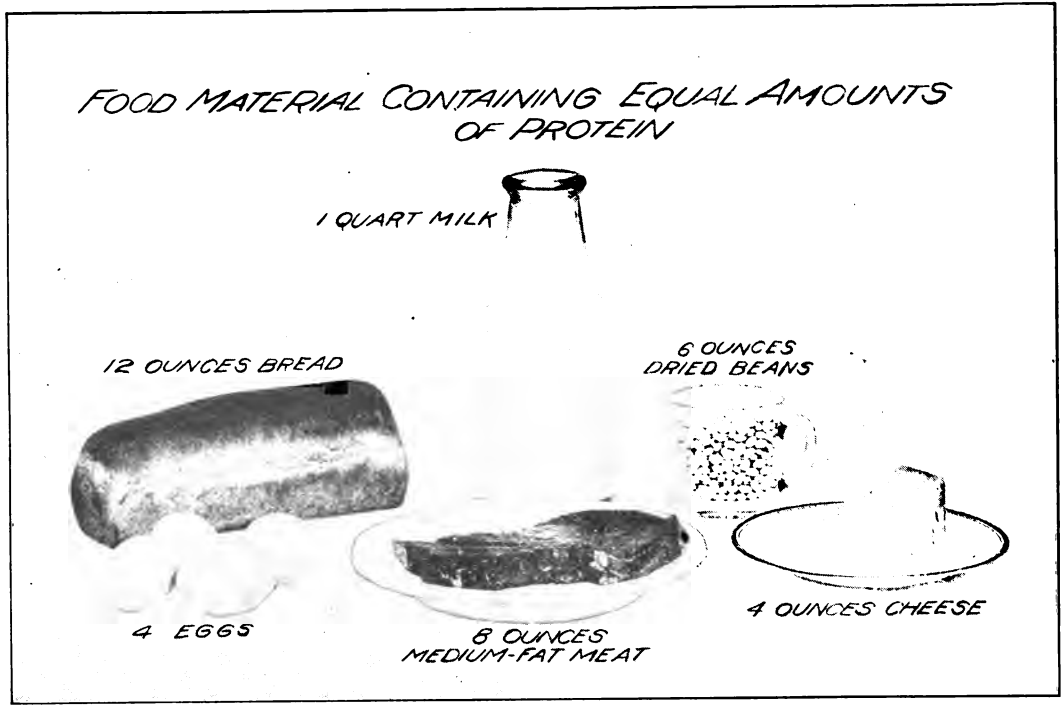
That the first of the five great groups is composed of fruit and vegetables.

That we need, especially for the making of teeth and bones, the mineral matter supplied by fruit and vegetables, and milk.

That if we use fruits and vegetables and milk freely we are quite sure to get enough of the vitamines that are needed to make us grow.

That fruit and vegetables also help to supply us with water, and add to our food the bulk which is needed in digestion.

That fresh fruit and vegetables are so hard to ship that we can help by using those that grow near home.


FOOD MATERIAL CONTAINING EQUAL AMOUNTS OF PROTEIN
1 QUART MILK
12 OUNCES BREAD
6 OUNCES DRIED BEANS
4 EGGS
8 OUNCES MEDIUM-FAT MEAT
4 OUNCES CHEESE

CHAPTER IV

FOODS THAT HELP BUILD THE BODY

After the children with the market basket have selected their fruit and vegetables they will next come to a booth filled with eatables which look as if they had never seen one another before and were surprised to find themselves in the same company. Some are in bottles, some in jars or in their own natural shells, some are in wooden boxes or cartons and rattle around whenever they are stirred, and some stand out boldly in all sorts of shapes, ready to be sliced and sold. Perhaps you have guessed that the bottles hold milk, that the jars and shells hold oysters and clams, that the boxes and cartons hold dried beans and peas and nuts, and that the food all ready to be sliced off is great pieces of meat—beef, mutton, pork, veal, and other kinds. Besides these, there are eggs, cheese, and fish.

It is certainly a queer collection at this second booth, for eggs and oysters, or pork and nuts, or beans and

cheese, have not often much to do with each other. In one respect, however, all these foods are alike; namely, they all contain a good deal of a substance called protein. It is by no means easy to extract the mineral matter from fruit and vegetables, but it is a simple matter for any one to get protein. If you live in the country, go to a wheat field, pick some grains of ripe wheat and chew them. They will soon become a gummy, elastic mass; and this is one kind of protein. If you live in a city, far away from fields of wheat, make a stiff dough of some flour and work it with your fingers in a dish of water or under a gentle trickle from a faucet until the starch is washed out; and what remains of the dough is the same kind of protein as that obtained from the wheat kernels. Aside from the water in them, lean meat, cottage cheese and the white of egg are almost entirely protein. Dried beans and peas, peanuts and lentils, although really vegetables, contain so much that they belong in this group. The soy bean, which first came to us from Japan and China, and is now raised in large quantities in America, is more than one-third protein. Fish contains almost as much as meat, while milk and cheese are the best protein foods we have.

The chief business of protein is to supply material for growth and repair. A child who does not have as much protein as he needs will become stunted. The body of a grown person does not increase in height like that of a child, but it is subject to constant wear and

tear, and if there were no way to replace what has been worn out, it would not take so very long for an active person to use up his body. A boy who goes barefooted all summer does not wear out the soles of his feet, or rather, what he does wear off is replaced; but he would wear out more than one pair of shoes if he gave them the same treatment that he gave his feet. Shoes wear out, but feet are kept in repair by the body.

Protein is an absolutely necessary food. This is what gives it its name, for the word protein means *of the first importance.* Unluckily, most people make the mistake of thinking that in order to get protein food they must buy meat; and as meat is usually expensive, they spend much more money in buying it than is at all necessary. If they only knew that cheese and eggs and milk, as well as fish and other seafoods, will take the place of meat altogether, and that beans, peas, and nuts will do a great deal toward filling its place, they would come home from market with fuller purses.

There is one thing that the children with the market basket should remember when they stand before the protein booth—that not all proteins which the foods provide are alike. Some come from animals and some from vegetables. Some can supply all the protein needs of the body, some only part of them. That is why, if we eat milk, cheese, eggs, or fish, we can do without meat altogether; but if we depend upon beans and peas, we need some milk, or eggs, or meat besides.

Fish is an excellent substitute for meat; but it is a pity that we have so many whims and prejudices about it, and fancy that a new kind of fish cannot be good because we have never heard of it before. If you make a list of the kinds of fish that you are accustomed to eat, you will find it a very short one, and yet there are at least seventy kinds of salt water fish and thirty of fresh water fish that we might be using as food. A number of these that we do not know are fully as good as those that we are accustomed to eating. Besides this we have salted, and dried, and canned fish. Many other countries use much more fish than we. We eat on an average only about one-third of a pound a week each, and most of us eat it only one day a week. Canadians average more than one pound, and English people average one and one-fourth pounds. It is foolish and narrow minded to be afraid to try new kinds.

Milk is one of the best protein foods we have, the very best for children. People often think of milk as a drink rather than a food because it is a liquid; but they ought to learn that a glass of milk has as much protein as a large egg or one and one-third ounces of meat.

Many people look upon milk as merely a luxury, and therefore they are ready to strike it out of their fare if its price rises. It is a pity that they do not understand how necessary a food milk is. Compared with other protein foods it is not expensive. Do you know that when milk is fifteen cents a quart and eggs sixty cents a dozen, a quarter of a dollar will buy more

protein in the form of milk than in that of eggs, and as much as in beef at thirty-five cents a pound? Milk, too, contains fat and sugar and other things that the body needs. It is a better source of lime than any other food, besides containing the substances called vitamines that we have just begun to know about. Every boy and girl ought to have at least a pint of milk a day, and every child under six should use a quart, while grown people should have some every day. Buy milk and save money is a good slogan for the housekeeper.

Even in skim milk and in buttermilk most of the protein and milk sugar and the greater part of the lime of the whole milk are found. Cottage cheese, even when made of skim milk, is a good substitute for meat. American cheese, too, may be used in place of meat, and has one advantage over milk in that it is not so bulky. A cube of cheese measuring one and one-fourth inches will furnish about as much protein as a glass of milk. Unluckily, we are not very sensible in our use of cheese. We ought to remember that it is one of the hearty foods and eat it in place of other protein foods instead of when we have already had enough.

Four large eggs contain about an ounce of protein, and so does a quart of milk, or half a cup of cottage cheese, or one and three-fourths cups of baked beans, or one-third of a pound of meat. Certainly, there is no monotony in protein foods and every taste ought to be suited with one or another of them. When the house-

keeper goes to buy protein foods, however, she must remember that from day to day her family will need variety, and that some of her daily supply of protein should always come from milk.

A wise man has said that no family should buy meat until at least a pint of milk has been bought for each member.

It is worth remembering:

That protein is found in a great variety of food, both animal and vegetable.

That protein supplies food for growth and repair; and that it is therefore of the first importance.

That there are different kinds of protein and that we need a variety, unless we get enough of the one best kind of protein food, milk.

That meat is not necessary if we use the right foods in its place.

That we ought to use more fish and to learn to know more varieties.

That to buy milk is a cheap way to get protein.

That every child needs milk each day.

CHAPTER V

CEREALS, FOODS RICH IN STARCH

If the children are fortunate enough to live in the country they will feel especially at home when they come to the third booth, for here are the cereals, wheat, rye, corn, rice, oats, barley, and buckwheat, most of them ground into flour or meal. Of course, these are not so interesting in their boxes and bags as when they were growing in the fields, but they must be looked upon with profound respect, for throughout the greater part of the world people eat more cereals than any other one kind of food. They are the cheapest of the fuel foods, they are easy to raise, and they are convenient to store away because they are almost dry and they do not spoil easily. A wise man once said that he hated to see anything take up more room than it was worth, but he would never have said that of cereals.

From cereals we get most of our starchy food, and

the chief business of this is to supply us with energy. It has been kindly planned for us that, even if we cannot get food from the group best adapted to supply some special need of our bodies, food of another group may answer the purpose to some degree. The foods in the second group are the best providers of protein, but the cereal foods also will give us much of the protein that we need.

The green things growing are a wise folk. They act as if they understood just what was best for themselves and also for the little plants that are to follow them. If you look at a kernel of corn, you will see, close to the end which clings to the cob, a small, yellowish part which often slips out when one is eating green corn. This part is called the embryo, or germ, and it contains the life of the kernel. It is always in a hurry to begin to grow, and if it is only given some water and left quietly in a dark, warm place, it will set to work promptly. Nothing can grow without food, however, plants no more than babies, and the mother plant has looked out for this very moment. The embryo itself contains protein and fat; but she has carefully packed this embryo into the kernel, and most of the kernel is made up of starch and other materials, which are just the proper food to give the embryo energy to push out of the kernel, produce its little roots and leaves, and set up for itself in the world. This is the early life not only of corn, but of all the grains.

In the olden times, beautiful stories arose from the facts of nature, and gradually became part of the religion of the people. They taught their children that Mother Earth, or Ceres, brought forth grain from the ground for them. They worshipped her and made offerings to induce her to give them generous harvests. They made statues of her as a kind and gracious woman, bearing a horn of plenty filled to overflowing with golden sheaves of grain. They delighted in the story that Pluto, king of the underworld, once stole away her little daughter to make her his queen. He gave her jewels and all the precious treasures that are found in the earth, but still she was sad and longed for her mother and the sunshine of the upper world; and at length the king of the Gods declared that the little daughter might spend half of every year with Ceres above ground; that is, putting it into the language of to-day, the kernel of grain spends part of the year underground and part in the air and sunshine. It is perhaps because of this myth of Ceres that we picture autumn, the harvest time, as a woman bearing sheaves of grain or ears of corn. Whittier wrote:

> "Heap high the farmer's wintry hoard!
> Heap high the golden corn!
> No richer gift has Autumn poured
> From out her lavish horn!"

The grains take their name of cereals from Ceres. To us corn means Indian corn or maize, but it is really

another name for grain, and in other countries is often given to the kind of grain that is most familiar there. To many Englishmen an "ear of corn" would mean a head of wheat; to the Scotchman, oats; to the Scandinavian, rye. In the Old Testament story of Joseph's brothers coming to Egypt to buy "corn" because there was a famine in their own country, "corn" means wheat or millet, and not the maize of America. Originally "corn" meant kernel, and this is its meaning in the words of Jesus, "Except a corn of wheat fall into the ground and die, it abideth alone."

Cereals are all good manufacturers of starch, but they need sunshine, and our American corn especially needs the sun. That is why hot, sunny days are called "good corn weather." The starch in cereals is closely packed into tiny cells with thin walls of cellulose, the substance that gives plants their form and stiffens their stems. The stems are older than the twigs, and therefore, contain more cellulose; that is why they are stiffer, just as young radishes are tender, but as they grow older, they form more of this substance and become tough. We do not digest cellulose readily, but some things are useful even if they are not digested. Cellulose is one of them, for it helps food to move on through the entire digestive tract.

Cereals are easy to cook, but they do need to be cooked a long time. This is because the little cells must be swelled with heat and moisture till they spread apart and their walls break down and set free the tiny


A VARIETY OF CEREALS
AND CEREAL PRODUCTS
WHEAT BREAD
CORN PONE
FLAKED
CORN
COOKED OATMEAL
INDIAN CORN

grains of starch. To save time in cooking, many people buy the prepared cereals that are half cooked or entirely cooked before they are put on the market. What are called "rolled oats" are oats steamed and then crushed between heavy rollers, in order to break down the walls of the cells and set the starch free.

There is very little difference in the amount of starch or other materials contained in the different cereals. We have fallen into the habit of using wheat in its various forms more than the other grains, chiefly because it makes lighter raised bread, but it is not at all necessary, and the others will fill its place in the work of feeding the body.

Some fruits and many vegetables contain starch, though not in nearly so large quantities as the grains. The legumes, for instance, peas, beans, lentils, and peanuts, besides attending to their chief business as makers of protein, also manufacture considerable starch. Another name for the legumes is the butterfly plants, because their blossoms look like little butterflies with their wings spread. These pretty little plants work hard to make food for us. They are no "slackers."

Some of the fruits and vegetables which manufacture starch as well as sugar contain both substances at the same time, and sometimes one changes into the other. Bananas and apples contain much starch when they are young and green, and much sugar when they are older. That is why they can be eaten cooked before

they are ripe enough to eat raw. There is a pretty experiment that can be tried with apples and a few drops of weak iodine, showing the change of starch into sugar. Cut a half-ripe apple in two at right angles with the stem, and put a little iodine on the surface. Whenever starch meets iodine, it turns blue; and the surface of this apple will turn to a deep, rich blue. Do the same thing later in the season, and although the apple will be blue, it will not be of nearly so deep a shade. By and by, when the apple is ripe, you will find that the iodine will bring out hardly a trace of color. That is, the apple has changed its starch into sugar.

In the shortage of grain, the potato is an excellent substitute. The potato is a tuber, that is, a part of the stem which grows underground, thickens, and forms a storehouse which is filled with starch. Every "eye" is capable of becoming a plant, and in the first place, the potato probably contained only what starch the eyes would need for their own growth. We have cultivated the potato, however, and so increased the amount of starch that it is now of much value for food.

A potato is really very interesting, not nearly so commonplace as it looks. The courtly Sir Walter Raleigh thought potatoes a gift fit to bestow upon a queen, and more than three hundred years ago he is said to have taken some from America to give to Queen Elizabeth. If you cut a thin slice crosswise from the middle of a raw potato and hold it up to the light, you

will see that it is not the same all the way through. Next to the skin there is a layer half an inch thick or less that is more nearly transparent than the rest. From the middle of the potato, irregular rays stretch out toward the skin in a sort of star. The sweet potato contains much sugar, but the greater part of both white and sweet potatoes is made up of little irregular rooms or cells, the walls of which are made of cellulose, and each cell is a tiny storeroom full of starch.

Chewing even a raw potato will break open the cells and set free much of this starch, but of course the potato becomes far more palatable if it is cooked. There is much water in a potato, and heat will expand it and break the cells apart, and the little grains of starch will swell; and now the tuber is more fit for food and will give a generous supply of energy. If you happen to be a Boy Scout, and know how to cook without a stove, you can roast potatoes out of doors, but you will not carry them on a mountain trip, because they contain so much water that they are very heavy in proportion to the amount of nourishment in them. That is why potatoes are not so good to send across the ocean as the grains, which contain little water and are almost solid food.

It is worth remembering:

That most of our starchy food comes from cereals.

That cereals are the cheapest source of energy; but must be thoroughly cooked.

That there is little difference in the food value of the various cereals.

That some fruits and vegetables manufacture starch as well as sugar.

That the potato is a good substitute for grain.

That if you eat more peas and beans you will not need so much bread.

Counting the Full Sap Buckets in Maple Sugar Time

CHAPTER VI

SUGAR AND SWEETS

The fourth booth in the great fair is the one that many children will like best, for here is sugar of every kind that you ever heard of—cane sugar, beet sugar, maple sugar, and even sugar of milk. There are also substitutes for sugar, such as honey, molasses, glucose, and corn sirup. Besides these, there are preserves and jam, and there are more kinds of candy than you ever imagined even in a dream of fairyland.

Sugar is so agreeable that we are often inclined to eat it in too large quantities or at the wrong time. Children are often told that if they eat sugar before dinner, it will "spoil their appetite." This is because eating it makes you feel as if you did not care for anything more, even though all the time your body may be in need of other food.

We eat sugar quite as much because we like it as because we need it. We can get from fruit and vege-

tables, especially dried fruit, all that we really require, though our food would not be so appetizing without some sugar.

In one way, however, sugar is of great value as a food. You know that soldiers sometimes carry an "emergency ration," which is not to be used unless their regular supply of food has given out. Sugar is a sort of emergency ration. If you are climbing a mountain, a lump of sugar or a few raisins now and then will help you on. Soldiers find that they can stand a hard march better if they have sugar. Of course some other food, like bread, for instance, or a baked potato, would answer the purpose; but they have no time to stop and cook, and if they had, these foods would take a longer time to digest and yield energy. Then, too, soldiers like it, and it makes up to them in part for the sweet dessert most of them have had at home. These are two reasons why we have had to be as saving of sugar as possible, in order to send it to them.

When people speak of sugar, they usually have in mind a bowl of white granulated sugar, but this is by no means fair to the other varieties. Nearly all our sugar comes from plants. Until about a century ago, all granulated sugar was made from the sugar cane. This is really a kind of grass, but a grass that might grow in a country of giants, for it is ten or fifteen feet in height, sometimes even twenty. The juice or sap is so sweet that children—and grown-up people, too—like to suck bits of the stalk.

These stalks are crushed in a mill and passed between rollers to squeeze out the juice. Solids are filtered out, then the liquid is boiled several times, the sugar crystallizing after each boiling and being removed. This gives what is called raw sugar. It is brown, and to make it white it has to be washed and filtered through a special kind of charcoal made from bone, and then crystallized again. This is what we call refining it. The refined sugar is of a slightly creamy color, and sometimes it is blued to make it look white. If you examine a few grains through a magnifying glass, you will find that each grain is a little crystal. Molasses is what is called a "by-product" of sugar-making. It contains a large amount of sugar, but to get all this sugar into a crystallized form is a thing that the ordinary methods of sugar-making have not yet succeeded in doing. Molasses is rich in lime, and so is better than sugar for growing children.

Sugar is also made from large, sweet beets. These are cut into slices, and the juice is extracted and purified. Then the liquid is evaporated, and a sugar results which is exactly the same thing as cane sugar. It will make jelly and do everything else that cane sugar will do. Before the war, the French raised large quantities of sugar beets; but France's beet-bearing lands have been partly in the hands of the enemy or within the fighting zone and now, even though they have been recovered, they will be in no condition for agriculture for a long time to come.

Sugar Cane

The same kind of sugar comes from one kind of maple tree that grows in many parts of this country. About the maple there is a charming story that, when one day the Lord of the Green Things Growing came to visit his garden, the plants were all eager to make him some gift. The rose and the lily gave their blossoms; the apple and the orange and the nut trees gave their fruit and were happy. The maple alone was troubled, for she had neither blossoms nor fruit to give him. At last she said sadly, "I have no beautiful blossoms and no delicious fruit, but I will gladly give you my own heart's blood." And that is the way, according to the legend, that the first maple sugar came into being.

To make maple sugar, a hole is bored a little way into the tree and a "spile" pushed in. Through this spile the sap trickles down into a bucket, then is poured into a kettle or a modern evaporator, and some of the water boiled out, leaving maple syrup. Evaporating more of the water will leave a mushy—but delicious—wet brown sugar; and what remains after still more evaporating is poured into moulds, and soon cakes of "new maple sugar" are for sale in the stores. Maple sugar could be refined and made white, but it would lose the characteristic flavor which people like so well.

Another kind of sugar is found in honey. In ancient times, before people had learned how to get sugar from plants, honey was very much prized because it was their only sweetening, and a land "flowing with milk and honey" was their way of describing a rich and fertile

country. To offer a guest milk and honey was a special courtesy. People of those times were very particular where their honey came from, and the ancient poets had much to say about the wonderfully good quality of that from a mountain in Greece named Hymettus. Honey still comes from that mountain, and it is exceedingly good; but persons who have tried it and also the honey made in America from the blossoms of basswood, or of white clover, say that the American honey is fully as delicate.

A kind of sugar called glucose is found in many fruits and vegetables, and also in honey. There is so much in grapes that it is sometimes called grape sugar. One form of this kind of sugar is made from the starch of corn, and is called corn sugar when it is sold in the solid form, or corn sirup when it is liquid. It is of common use in confectionery, jelly, preserves, and in canning. It is used, too, as a table sirup. In many countries the same sugar is made from potato starch.

In parts of our country a sirup is made from sorghum, a plant that has been known in China for many centuries. Many farmers in a community will grow a field of sorghum cane, which is not unlike the sugar cane in appearance. One farmer will set up the mill and grind this cane for his neighbors. The cane comes to the mill heaped high in large wagons and the product is returned to the farmers in the large cans or vats provided for the purpose. The mill is a simple affair erected out of doors and turned by a horse or mule

Sugar Beets

walking round and round, but it grinds the cane under heavy pressure and forces out the greenish, strong-tasting juice. The sirup is boiled in a series of large pans supported on bricks over a fire, and so arranged that the sirup as it boils runs over from the higher into the lower pans, leaving behind the impurities and becoming clearer. When it flows from the last pan it is clear and thick and ready for table use. Ribbon cane sirup is prepared in many places in the south in the same way.

Not only sugar cane and beets and maple trees contain sugar in their sap, but many other plants and some of the vegetables that we use commonly. The chief difficulty is that there is not enough in them to make it worth while to extract it for the market. Fruits, especially sun-dried fruits, contain a good deal of sugar. Raisins, for instance, which will often take the place of sugar, are exceedingly sweet, and they are merely grapes dried in the sun, and contain only the sugar that was in them in the first place. Cakes and desserts that have raisins in them do not need so much sugar. Dates and figs are also good to use in place of sugar.

While most of our sugar comes from plants, some is found in the animal kingdom. If skim milk or whey is boiled till most of the water is evaporated, and is allowed to stand quietly for a while, tiny crystals form and drop to the bottom of the dish. This is milk sugar. It is an expensive kind of sugar. To make one quart of it takes at least twenty quarts of milk. It is

not so sweet as ordinary sugar. Sugar of milk is used in dry medicines. If you are ever given small pills that taste rather sweet, you may be almost sure that they are made of sugar of milk mixed with whatever medicine is needed. It is used too for babies' food.

It is worth remembering:

That sugar should be eaten in small quantities and never before meals.

That sugar is of value chiefly as an "emergency ration" and to make other foods palatable.

That sweet fruits will give us much of the sugar we need, and other important things as well.

That many fruits and some vegetables contain sugar, but only a few of them in sufficiently large quantities to pay for extracting.

Little Europeans Returning from an American Soup Kitchen with Food for Their Hungry Families

CHAPTER VII

FATS AND FATTY FOODS

If children are asked if they like fat, they usually say "no" very scornfully, for "fat" means to them the fat which comes on meat, or the blubber of whales that is eaten by the Esquimaux of the frozen North; and yet the average amount of fat eaten, or wasted, every day by people in this country is about five and one-half ounces, more than a quarter of a pound, and most children as well as grown people would think it pretty hard if they had to do without it.

When the children who are doing the marketing come to the booth of fats, what will they see? They will see a good supply of more appetizing articles than pieces of fat meat and blubber. They will see rich, sweet cream, golden butter, bacon, and nuts, as well as suet, nut oils, lard, and dripping. Chocolate and peanut butter and cocoanut will be here too. Surely,

the children will find something for their market basket which they will really like.

The most common form in which fat appears on the table is butter, the fat of milk. Fat is lighter than the rest of the milk, so it rises to the top in the form of cream and is skimmed off. Then it is poured into a churn and kept in motion with a dasher or paddle-wheel until the butter "comes," that is, until the fat has separated from the rest of the milk and is floating about the buttermilk in tiny masses. The motion is what causes the separation, and many a time a bottle of cream taken to a picnic in a carriage or automobile has reached the picnic grounds in the shape of butter. A few years ago, there was in the Patent Office in Washington a model of an odd sort of churn, on which some inventive genius had applied for a patent. It was in the shape of a rocking chair which, instead of arms, had cylinders. These were to be filled with cream; then the butter maker was to sit down in the chair and rock comfortably until the butter had come.

After the fat has separated from the rest of the milk, it is worked and washed to make sure that the buttermilk is out of it; then it is salted and is now ready to be eaten. Of course creameries do all this work by machinery, but it is not at all difficult to make a little butter with a bowl of cream and an egg-beater, and it will taste just as good as if it came from the best of creameries.

The things nearest like butter are oleomargarine

and nut margarine. Oleomargarine is made chiefly of the fat of beef mixed with extra pure lard and cottonseed oil and churned up with milk. It is therefore a mixture of animal and vegetable fats. Nut margarine is made of vegetable oils, such as cocoanut, cottonseed, and peanut.

Some plants produce a large quantity of oil. Two-fifths of the flesh of the olive is oil, and there is even more than that amount in the kernel. Cottonseed is one-fourth oil. Even corn and oat meal contain some fat. The kernel of the peanut is nearly two-thirds oil. Cocoanut contains a great deal. The nut trees are so successful in their oil manufacture that if they were men, they would surely make their fortunes. If you put a thin slice of almost any nut between two pieces of paper and strike it lightly with a hammer, the paper will show a greasy mark.

Nuts are usually eaten at precisely the wrong time, for nuts, like all fats, are highly concentrated food, and to eat a saucer of them as dessert after a hearty dinner is almost as foolish as it would be to eat a dessert of roast pork after a dinner of roast beef. Nuts should not be eaten just for flavor after a meal, but as part of the meal itself, and as a substantial food.

Since fat is to be found in so many different places and in so many varieties, any one whose taste cannot be suited by one kind or another must be hard to please. In a tablespoonful of butter there is about half an ounce of fat; but if you do not care to eat the butter,

you can get the same amount by eating an inch cube of cheese, or twenty-nine peanut kernels, or better still a pint of milk. Surely every one ought to be satisfied.

Fat is too concentrated a food to be eaten by itself. We put butter on bread, cream on cereals, and salad oil on lettuce; but not many people in a temperate climate care to eat a whole mouthful of fat meat or to drink a cup of oil. Often we cook our fats, using them for shortening or in frying. Food that is fried has often a particularly rich flavor, but frying needs more skill than other methods of cooking if the food is to be readily digested and palatable. Did you ever see a doughnut that was soggy and would leave a big stain of grease if laid on a piece of paper because it had not been fried properly, or potatoes that were soaked in grease instead of being dry and crisp?

Fat is sometimes spoken of as "hearty food," since it enables us to do hard work without a "gone feeling." This is because it stays in the stomach a long time. After the stomach has been empty a while, it begins to make remarks on the situation, and the possessor of the stomach feels a sensation of hunger. A slice of bread with butter on it keeps off this sensation much longer than the bread alone. On the other hand, if one has eaten too much fat, one's stomach feels uncomfortable and overloaded. Most people make the mistake of thinking that for a hearty food they must buy meat, but this is far from being true, for it is chiefly the fat in the meat which makes it a hearty food and

this can be obtained in other ways. People who are doing hard work need hearty or, as we sometimes say, concentrated food. This is why we had to save fat as much as possible in order to send it to the fighting men.

Whether fats are solid or liquid makes no difference in their value as food. So far as that goes, a Brazil nut or a little olive oil answers the same purpose. There is one thing that makes a real difference between the different kinds of fat. One kind of the vitamines that we talked about when we were visiting the fruit and vegetable booth is found in connection with fat, though only some fats contain it. This is necessary for growth, so if we are not getting it in some other way we must be particular about the kind of fat we choose. Milk fat (butter) contains it and so does egg yolk, and most animal fats, though lard does not. It has not been found in most vegetable oils, though corn oil has it. If we have plenty of milk and of leafy vegetables we do not need to think very much about this, for we shall be quite sure to get enough.

By the time that the boys and girls with the market basket have finished their buying, they will have collected a good deal of valuable information about prices and kinds of food. On their next trip, they can start about their marketing in a more businesslike way, keeping it in mind that in order to make sure of proper nourishment for their family, part of their food for each day should come from each booth. How much money to spend is a question that affects almost every-

one, and the best way to decide this is by making a "budget," as a well managed factory would, or just as the British Government does for its expenditures. After learning how much money can be spared for food each week, this should be divided among the five groups, not haphazard, but wisely and after careful planning. Supposing that in a household consisting of father, mother, and two children, it has been found that $10 a week can be devoted to food, a good plan would be to divide this among the five food groups, setting aside first a special share for milk. If the family lived in the city and everything had to be bought, the food budget might read somewhat like this:

Milk	$ 2.20
Vegetables and fruit	2.20
Proteins—eggs, cottage cheese, American cheese, fish, meat, dried beans, etc.	2.20
Cereals, including bread	2.00
Sugar or other sweetening	.30
Fats	.80
Sundries	.30
TOTAL	$10.00

If the father, mother and two children together require as much food as three men doing moderately hard, muscular work, then their day's food supply might well be something like this:

Fruit and vegetables (including potatoes) at least	5 pounds
Milk, at least	2 quarts

Eggs, legumes, meat, cheese, about	1 pound
Cereals (including breadstuffs) about	3 pounds
or less of these and more potatoes	
Sweets	$\frac{1}{4}$ to $\frac{1}{2}$ pound
Fats	$\frac{1}{4}$ to $\frac{1}{2}$ pound

A wise choice of food is always an important matter, because upon this depends in so great a degree our health and our ability to do our share of the work of the world. It was especially important in the days of warfare, because America had to provide so much food not only for herself but also for those who, together with her, were fighting for the freedom of the world. It is even more important in these days of reconstruction, of building up the world anew, and of trying to make it a better world than we have ever had before.

It is worth remembering:

That fat exists in many forms.

That fat is a hearty food, too concentrated to be eaten by itself.

That at least a part of our fatty food should come from milk or butter or from some other substance that contains the kind of vitamine found with fat.

That to spend wisely we should make a careful plan.

American Clothes and Real Milk Have Been Furnished to Many European Children

CHAPTER VIII

HUNGRY EUROPE

In one of the magazines published during the war there are some verses in which an American baby is supposed to speak. He tells of the good times that he had and at the end he says:

> I'm fat and rosy and stuffed and pampered and happy, and maybe
> There's anything you can think of better to be than an American baby.

Then another little one speaks, a French baby, thin and troubled, and with sad questioning eyes. His father has been killed in the war, and he tells what a lonesome time he has while his mother is gone to work all day. He tells of the miserable grass tea that is all she has to give him to eat. Then he says:

> Once in a blue moon, there's a large, deep-voiced Person in Black
> Called the curé, who brings me real milk—just a little, but, oh, isn't it fine!

And when I see it coming, warm and white, I'm in such a hurry that I whimper and whine
For pure joy, and the Curé smiles a bit, watching me, and says I'm the hope of France;
But how can a chap be the hope of France when he can't get enough food to have a chance?

Before the war, the little French babies had enough to eat, most of it raised at home and not brought in from other countries. France contains a large number of small farms, and nearly every one of them was cultivated by the family that owned it. These farmers were anxious of course to have as good crops as possible. They were in general wide-awake people, and had no idea of carrying on their farms just as their grandfathers had done. They kept their eyes open for new methods and as soon as they found one that was an improvement on their own, they adopted it. The result was that France raised more of her own food than any other of the western Allies. She raised more than one-third as much wheat as the United States, and she cultivated great quantities of sugar beets. She raised horses and sheep, but grass land was not ample enough to feed large numbers of cattle. There were, however, vineyards without number; there were peaches and cherries and oranges and lemons, and wherever nothing else would grow, there were chestnut trees, and of the chestnuts some of the thrifty French people made an excellent flour. The French are never wasteful, and they do much with a little. France was well-fed, busy, and happy.

Then came the war, and everything was changed. In 1917, France raised less than half as much wheat as usual, less than two-thirds as many potatoes, and only one-third as much sugar. Her numbers of cattle, sheep, and hogs had greatly decreased. How did the war bring this about?

In the first place, there were no men to work in the fields. All able-bodied Frenchmen were either fighting, making munitions, or helping to transport soldiers and guns and supplies. The men left at home were those who were too old and feeble to do much work, the wounded soldiers, and the sick. Then, too, there were not so many fields as formerly. Some of the richest land in the country was either in the hands of the Germans or had been overrun by them.

War always means destruction, but military commanders of other nations are proud of not injuring non-combatants and of doing no harm to the country through which they pass other than that which will be of military value to them. Roads and railroads must often be destroyed, wires and cables torn down, sometimes wells blown up; but the Germans set to work deliberately to do as much harm as possible. They demolished famous buildings and works of art; they burned villages and towns; they bombed hospitals; they cut down fruit trees and vineyards; they poisoned wells, and did many other cruel things. The result is that people who struggled back to their old homes found only cinders for houses and waste land for cultivated fields.

These people shelter themselves as best they can, but it is easier to put together something for a rough protection against the weather than to raise wheat in a field that has been torn to pieces by shells. But the French women have done wonders. Wherever it was possible, a woman has always been ready to take the place of a man so that the man might help to defend the country. The women have cared for their children and the sick, they have toiled at all kinds of labor in factories and workrooms, caring not what it was or whether it was hard or easy, if only it would help France. They have ploughed and planted and reaped. Sometimes a few soldiers could be allowed to come home to help in harvesting, and sometimes prisoners of war have been of service in the farm work; but the greater part of the labor of raising food has been done by the French women with the aid of the aged and the children.

France needed more food than before. The bravest troops cannot do their best when they are hungry, and whoever went without, the soldiers had to be fed. And then there were the Frenchmen who had been captured and who were starving in German prison camps. Food had to be sent to them if their lives were to be saved. The weather was unfavorable and the crops failed, but still the brave French women kept on, weary and suffering, but not complaining.

In France to-day, butter, cheese, meat, and even potatoes are enormously dear. The only food that

everybody can afford to buy is bread. The Government has kept the price of bread low; but it is rationed, and a ten-ounce ration card does not always mean that its holder can get in exchange the full ten ounces. In some of the mountain districts, what bread can be bought is black and has a disagreeable odor. It is made of chestnut flour mixed with oats, barley, and a little buckwheat.

There have been no invaders on English soil as on that of France, but the British have been in the trenches, or on warships in the North Sea, or convoying troops, or making munitions in one or another of the 5,000 war factories of England. Here, too, as in France, women have stepped into the vacant places. They have acted as conductors on trains, as porters at railroad stations. They have toiled in munition factories. The petted daughters of noblemen have worked twelve hours a day side by side with women who have known nothing but toil all their lives; and they have all lived together in little villages built close to the factories. The beautiful velvety turf of England has been ploughed up and the great parks turned into potato fields; and here too, women have been hard at work. In spite of the labor shortage more food was raised on English soil the last year of the war than ever before.

Nevertheless, food is not plentiful. One sort of food after another has grown scanty, then disappeared. Fats in general are scarce. There is only a little milk, and that is saved for the children and the sick. Turn-

ing grass land into potato fields is better to supply food for the people, but it is not good for the keeping of cows, and many have been killed.

Everyone knows the brave and victorious struggle that Italy has made at the front, but not everyone realizes that her fight with hunger has been just as brave. Even to-day, her bread and meat and sugar—what she can get of them—are of poorer quality than is common in any other of the Allied countries. She needs coal almost as badly as food, for part of the time coal has cost $110 a ton; and even at that price, the railroads could hardly get enough to keep running. If she only had plenty of coal, what food there is could be distributed over the country; but as it is, even if there is sufficient of any kind of food in one part of the land, there is often no way of getting it to the other parts.

Belgium was far more helpless than were these other countries. Belgium was what is called a neutralized state. The little country is not one-fourth as large as the State of New York, but it is so situated that any country controlling it could, if she chose, do great harm to England, France, or Germany. That is why these countries, as well as Austria and Russia, all signed a treaty declaring that, no matter what wars might break out, no one of them would ever attack Belgium. Belgium, on her side, promised that she would never favor any one country to the loss of any other.

Everybody knows what happened when, in 1914,

hundreds of thousands of German troops suddenly swarmed out of the trains at Belgium's frontier and demanded a passage through the country. But Belgium refused to break her promises. She marched out her little army, and how they did fight! Of course they could not drive the hordes of Germans back, but they did delay them two full weeks. France and England had time to get some troops into the field, and Germany's plan to dash into France and perhaps capture Paris before the French could get their troops into position was spoiled.

Everyone knows, too, how the German armies behaved after they had made their way into Belgium; how they murdered and tortured and looted and destroyed; how they shelled magnificent old buildings that had been for centuries the pride of the country; how they burned village after village because some one person was perhaps accused of firing a single shot at them. They seized the railroads, telephones, and telegraphs, the canals, the cars, and the mails. Every little village was cut off from every other. They stopped all business; they carried off to Germany all that there was in the country of oil, wool, copper, rubber —anything they could make use of; and then they tore away from their homes thousands of men, women, boys, and girls and carried them away to toil in the mines and factories of Germany, manufacturing articles that would be used to help overpower their own people. Of course the Germans wanted only the well and

strong; the old and feeble were allowed to remain. Little food could be left in Belgium after such treatment, and this was quite according to the plans of the Germans. They were not unwilling that the Belgians should starve. The more that died the better; then the land would be free for them to occupy.

Americans promptly sent food to the Belgians, and four months after the beginning of the war the Commission for Relief in Belgium was formed. The wise work of this Commission and the generous sympathy of the American people and the Allies saved Belgium from starvation. "Never has a country had such friends," said the Belgian minister. But at best the Belgians have had only just enough to keep them alive. More than half of them are still in soup lines. If means of industry and happiness are to be restored to their country, food must be provided in generous quantities.

Roumania, Serbia, and Poland are starving; so are Armenia, Finland, and some parts of Russia. Germany swept through Roumania, driving the Roumanians into a small corner of their land, the least fertile of all. They had no hope of resisting their foes, for enemies were on all sides, and they yielded. But they might almost as well have struggled till every Roumanian had fallen, for here, as well as in Serbia and Poland and Russia, the German troops seized everything in the shape of food that they could find. They searched not only storehouses and stores, but all the little cottages, and carried away everything that could be eaten.

The German governor-general of Poland commanded that every able-bodied Pole should go to Germany to work for his conquerors. This meant that for each Pole one more German would be set free for the army. If a Pole dared to refuse, it was forbidden for any other Pole, even his own brother, to give him a mouthful of food

War is always terrible, and some years ago representatives of the different nations of the world met at The Hague in Holland and signed an agreement never to do certain things which added to its horrors. One of these things was that no conquering army should take supplies from the land it had captured unless it paid for what it took and did not leave the country in want. Germany signed this agreement, but, as every one of the lands that she has overpowered has learned, she did not keep it. In all these countries food for man and beast was seized, horses were carried off, and cattle and hogs either driven away or killed for food to supply the invaders.

These are the reasons why so much of Europe is suffering from hunger, why the countries that have been crushed by Germany are more helpless than countries have ever been before, and why they appeal to those who are in comfort and plenty for a share at the "common table."

It is worth remembering:

That France formerly raised more of her own food than any other of the western Allies.

That much of the fertile land of France was overrun by the Germans.

That England, in spite of her labor shortage, has actually increased her production of food, though she still needs to import a great deal.

That Belgium, swept clean of food, raw materials, and machinery, and with her people weakened by captivity, is still in sorest need of a helping hand.

That Italy needs food, and also coal to help distribute what food she has.

That many other countries of Europe must have help to keep their people from starving.

CHAPTER IX

WHERE IS THE FOOD OF THE WORLD?

If people have not proper food they soon grow thin. This is because the fat stored up in their bodies is being used up to feed them. They can live on it for some time, just as a bear is nourished by the fat in his body during his long winter's sleep; but by and by, even before the fat gives out, the protein is called upon. By this time the person is not far from the point of starvation.

Before the war most of the world got on fairly well for food. Occasionally there was a famine in one country or another, but other countries sent ships of provisions or money to buy provisions. In those days provisions could always be bought somewhere.

Why is the condition of things so different now? Where are the grain, the meat, the fish, the fats, and the sugar that used to supply Europe? If a country can raise the money, why can it not buy what it needs?

One answer to these questions is that there is actually less food in the world; for millions of men who used to produce it were called into the armies or to work on munitions, so that less food has been raised. Another answer is that the ground on the Continent which has been fought over is now unfit for agriculture. Still another is that few countries, if any, are in the habit of supplying all their own food, and if they are shut off from their usual places of buying, they are as much at a loss as we should be if all the provision stores should suddenly disappear. In some of these countries the people have been so busy manufacturing that they found it cheaper and easier to import food than to raise it. In others there are so many people in proportion to the area that sufficient land to raise what they required could not be spared. Often the soil or the climate is not adapted to produce what is needed.

Then, too, there is the question of fertilizers. In Europe the soil has been cultivated for centuries. It will no longer do well without fertilizers. The nitrates, which are used in fertilizers, are found chiefly in Chile, and these could not be imported during the war. Work animals have been seized by the contending armies or killed because there was no feed for them. As a result of all this, France has raised less than half of the wheat that she needs for her people. Poor Belgium has almost no wheat, and Italy only a part of what she needs. Though England has increased her production, she has raised only one-fourth enough to supply her people.

Even before the war, Austria-Hungary raised only enough wheat for herself, and had little for her neighbors. As for Germany, she imported part of her wheat, and even what she has looted from the lands that she has overrun has not been as much as she requires. Then, too, the crops in these two countries have not been up to the usual mark.

Before the war England, Ireland, France, Italy, and Belgium imported 750,000,000 bushels of wheat in the course of a year. Russia and Roumania were near at hand, both of them fine wheat countries, and a large quantity came from them. But Roumania was overrun by the Germans, her farm-lands were ruined, and she has no wheat or any other food to send to any country, or even to break the famine within her own boundaries.

During the war Turkey closed the Bosphorus; that is, she allowed no ships to pass save those of Germany and Austria, and therefore no wheat could in any case be brought from Russia to the Allies. Russia is in a turmoil; the once fertile Ukraine has been in the hands of the Germans; but even if the whole country were united, many of her own people would still be hungry, for there is no way to carry food from one part of the country to another. Russia in Europe is one-fourth larger than all the rest of the Continent. She has millions of acres of the best wheat land in the world, but few railroads. However, if the whole land were crisscrossed with railroads, they would be of little use be-

cause of the lack of coal. Russia's best coal is mined in the extreme south or in Poland, which only the close of the war released from the hands of the Germans.

Australia and India had hundreds of millions of bushels of wheat. Argentina can usually export part of hers to Europe, but her 1917 crop was not so good as usual. Moreover, it is a long way from Australia and India to Europe, and not so very much nearer from Argentina, and during the war the ships were needed to transport soldiers. A ship could transport a good many soldiers from the United States across the Atlantic in the time that it would take to make a voyage from Australia to England.

The Allies in Europe are lacking meat, for they have lost many of their cattle. One reason is that in the great need of meat, cattle have been slaughtered and used as food. Sometimes this was done because there was no one to care for them. Men who are fighting in the trenches cannot come home at night to milk the cows and feed them. Another reason is because much land that has been used for pasture has now been ploughed up in the effort to raise more grain for the people. Even before the war much fodder was imported, and now many cattle have had to be killed for the lack of food. In Belgium and northern France the invading Germans either killed the cattle or drove them to Germany. Australia and South America would have been glad to send more beef and mutton, if there had only been some way of providing ships. The

United States and Canada have been sending both meat and wheat to the extent of their ability.

To lose cattle is of course a great misfortune for grown folk, but it is particularly bad for the children, since milk is the food that they especially need, as it gives them protein, sugar, fats, lime, and other mineral matter, and both kinds of vitamines in abundance. A pint of milk contains as much protein as two eggs, as much fat as an ordinary serving of butter, and even more sugar than fat. It also contains lime enough for one day.

If more fish could be obtained and if people were willing to try new kinds, it would in some degree take the place of meat. Fish contains considerable protein, sometimes as much as 22 per cent., and some kinds, such as shad, mackerel, and herring, contain as much fat as is in some cuts of meat, such as lean round steak. The waters about England are swarming with fish, but the country's supply is less than half the usual quantity. One reason is that nearly all of her steam fishing vessels have been taken over by the Navy, and the fishermen of military age have been in service. Another reason is that the North Sea has been so full of mines that it was almost as dangerous as a battlefield; and still another is that the Germans were just as ready to sink a tiny fishing craft—even one belonging to a neutral country—as a large ship. It is estimated that during the first years of the war, about one-tenth of the food sent to the Allies was destroyed by submarines. If

Kipling should write another "Captains Courageous," he might tell a thrilling story indeed.

Pork is needed in Europe even more than beef. The humble pig can no longer be despised, for he has become a highly valued member of society. Pigs are easy to raise. They are not particular about climate, and as for food, they will eat almost anything they can get—indeed, the people who eat the pig are really more particular about his food than the pig himself is, for of course the nature of his diet affects the quality of the pork, and in this matter the pig has no concern.

An interesting question has arisen in regard to keeping pigs and cattle, namely, whether it is better to eat the grain ourselves or to give it to these animals and then eat them. Protein is valuable, and the pig, for instance, does not give back in the form of pork nearly so much protein as was in the grain that he ate; that is, the pig is not an economical machine for turning grain into meat, and cattle are still less efficient. On the other hand, in ordinary times more grain is raised than is needed for human food. Moreover, pigs are not fed on grain alone, but in large part on food that would not be eaten by people.

Another point in favor of pork is that it contains much fat, and all the world is in pressing need of fat. Here the question of shipping comes in. Even if a pig is not an economical machine for making pork, he is the only variety of machine for that purpose yet discovered, and pork is an economical food to send

across the ocean. When economy in shipping is to be considered, we must remember that one hundred pounds of pork will take much less tonnage than would be needed to carry the fodder to raise the hundred pounds. After all, pigs really do their best for us. Fat, as has been said before, provides energy; and fried food, even when it does not "soak fat," contains a great deal. A doughnut contains from 20 per cent. to 30 per cent. of fat. The doughnuts that the lassies of the Salvation Army fry for the soldiers must be remembered with respect, for they have helped to fight our battles.

Sugar is a good food to send, for it is concentrated and takes little space, and if it does not get wet it will keep indefinitely. Before the war there was a "middle Europe" of sugar beet raising—Belgium, northern France, Germany, Austria-Hungary, and part of Russia—which raised more than nine-tenths of the beet sugar of the world, and England bought more than half her supply from this source. France all during the war has continued to produce some sugar, but she has been able to raise only about one-fourth of what she generally needs. Java has been ready to furnish sugar and would gladly furnish it to-day, for she has a large supply on hand; but, as in the case of Australia, the lack of ships has made it impossible to get the sugar from there. As soon as ships are available Java will send it to these countries. France and England and Italy have done their best and will never

cease to do their best, but they need food and must have it.

A little girl once listened to her mother reading a pitiful story from a paper. As the mother was turning the page, the little girl asked earnestly, "But mother, what are you going to *do* about it?"

It is worth remembering:

That one who is not well nourished cannot do his work.

That there is less food than usual in the world.

That the world demands far greater supplies of food from us than were needed while many peoples were cut off from help by the battle lines.

CHAPTER X

WHAT WE DID ABOUT IT

"What are you going to *do* about it?" was the question that we asked ourselves when we heard of the sufferings of the Belgians. We sent ships across the ocean loaded with food, and we sent strong, wise men to distribute it among the starving people. Hundreds of Belgian children wrote letters to us in the best English they could muster—think of their courage in writing a letter to 105,000,000 people!—and told how grateful they were. One of these letters reads as follows:

DEAR AMERICA:

I thank you because you sent great big boats over the great sea —eat-boats—rice, corn, bacon, stockings, clothing and shoes.

I know that you like the little Belgians, and I like you, too.

ACHIEL MAES.

Then came the sinking of the *Lusitania*, the great steamship full of people who had never struck a blow

at Germany. Of the 1,154 drowned, 114 were American citizens. Germany paid no attention to the protests of the United States and went on sinking vessels of all nations, ships carrying food to Belgium, Red Cross hospital ships, and ships of neutral countries, making no provision for the escape of the passengers, and sometimes firing at them if they succeeded in getting into lifeboats. This was rank piracy, and the United States now declared war.

There was another reason, and a strong one, for our entering the war. The United States is a democracy—that is, the people rule. Germany was an autocracy—that is, one man ruled and was answerable to nobody. The Kaiser did not formally notify his council that he had declared war until three days after the declaration was made. As country after country engaged in the war, it became a struggle between autocracy and democracy. Moreover, Germany meant to crush France, then England, and then attack the United States. For two years and a half England and France had been fighting our battles. It was high time that we took a hand.

There were three things for us to do to help free the world from the danger of autocracy. We must lend money to the Allies; we must furnish an army to help do the fighting; and we must send them food. The United States is a rich country, and there was no trouble about lending the money. It is a brave, earnest country, and soon hundreds of thousands of young men

Grandfather and Bob Shared Their Garden and Orchard with the Children of Allied Lands

were in the cantonments learning to be soldiers. To provide food was a more complicated matter.

The first food that a hungry nation thinks of is bread; and "bread" means to each one the grain to which its people are most accustomed. We should think we had no bread if we had only rice in the house; but a Chinaman would think he had no bread if he had only wheat. Some of the people in this country have always been accustomed to eating more or less rye, oatmeal, corn meal, rice, and buckwheat; but our great dependence has been wheat. Other flours will make "quick breads," but wheat is the only grain that will make the light white loaf of yeast bread that we are used to eating. This looks well and keeps well, and it has not so strong a flavor of its own as to spoil the flavor of other food.

This is the kind of bread to which the Allies are accustomed; but there was not enough wheat to supply us and them, too, with the usual quantity. The best we could do was to "go halves," while both of us made up what was lacking by using the other grains. These grains will not by themselves make a loaf of raised bread that can be baked in a bakery and kept on sale, and it is bread like this which is necessary in France. French women always buy their bread. They have no ovens, and if they had, fuel is too dear for them to dream of doing their baking at home, while the baker can with a small amount of coal bake many loaves at the same time.

It is not easy to change one's habits of eating. Every one has whims about his food. For instance, Italians fry in oil, but many Americans still feel that the frying material must be solid like lard when it is put into the kettle, even though they know that in three or four minutes it will become liquid. If potatoes should suddenly turn blue and bread scarlet, it would be a long time before we should relish them. Those among us who found it difficult to use less wheat and more of the other cereals are the ones who ought to understand best how hard it was for the Allies to become accustomed to putting other grains into their bread. They made no complaint, however, but were grateful that the American supply did not fail them. There was wheat in Australia and New Zealand and in Argentina, but ships could not be spared to carry it to Europe. From the United States to England is not only the shortest route, but it was also the best protected from submarines. In the time that it would take a ship to go from Argentina to England, it could carry two loads of soldiers from the United States to France. It was just plain arithmetic. The shorter the voyage, the more free ships; the more free ships, the more food and soldiers carried to Europe; the more food and soldiers carried to Europe, the sooner we could win the war; the sooner we could win the war, the fewer of our own boys and of the Allies would be wounded or killed. It was worth our while to send food.

As in the case of wheat, meat could not be carried

to Europe from distant countries for lack of ships. Meat is the best protein for transportation. Beef contains much protein, keeps well, and is condensed food. Pork is particularly valuable because it provides both protein and fat. In Ireland people used to call the pig "the gentleman that pays the rent." "The gentleman" does more than that in these days, for he has been trying his best to support the country.

In 1917 not nearly so many pigs were kept as usual. This was alarming, because pork can be raised more quickly and easily than other meats. Hogs multiply rapidly, and have sometimes ten or twelve little pigs at a litter. The "keep-a-pig" movement had been started some years before, and now it took a new life. An effort was made to make people understand that a pig-pen need not be a bad-smelling place, that a pig likes to wallow in mud on a hot day, not because he is naturally dirty, but because the mud is as great a comfort to him as a cool bath is to people. The pig is by nature a cleanly animal, and he appreciates fresh water and good food.

Boys on farms became interested. "Have you bought a pig?" became almost as common a salutation as, "How do you do?" Before long the magazines began to print pictures of remarkably small boys grouped with remarkably large pigs. The problem was solved; and in March, 1918, we sent across the water six times as much pork as our ordinary export.

The men going "over the top" needed fat not only for energy, but because it would keep them from feeling hungry so soon, and that was an important matter when the time of their next meal was a question that no one could answer. In this country we use a great deal of fat, and if you should make a list of all the food that you eat during the day, and then cross off every article that contained fat or was cooked or eaten with fat, very few would be left. Before the war, England used, according to her population, nearly as much fat as the United States. Quantities of butter were sold to her by Holland, Denmark, Sweden, and Russia. The Russian supply soon failed. Holland, Denmark, and Sweden were neutral countries, but they needed Germany's coal, and Germany would not send it to them unless she could receive butter in return. England made much oleomargarine, but even with this her ration of fat was only one-fourth of a pound per week; and often this small amount could not be bought.

As to sugar, this is to us an agreeable luxury in a convenient form. A bright man once said, "Give me the luxuries and I will dispense with the necessities:" and when we were asked to use less sugar than was our custom, it really seemed to trouble us more than saving fats or wheat. Sugar has been very cheap, and we had fallen into the habit of using much more than we need and more than is good for us. Even in 1917, when we all thought ourselves so economical, we used an amount

that the Allies would have looked upon as luxury. What was used in preserving, however, was "good business," for much fruit was saved that would otherwise have gone to waste. There was no danger of our suffering for sweets, since we had honey, molasses, corn sirup, and maple sugar, to say nothing of our sweet fruits, like plums, peaches, apples, and berries. We had dried fruits, like raisins, dates, and prunes, that are even sweeter. When you feel hungry for candy, eat some one of these, and candy will not seem half so attractive. On an average every person in this country spends about four cents a week for candy. In six months enough money goes into it to feed the hungry people of Belgium for a whole year. That looks as if we could get on very comfortably with less than our usual amount.

One year before the close of the war, our Food Administration was formed. It is not easy to realize the full meaning of a statement whose numbers go up into the millions, but sometimes it is worth while to try. Here is what the Food Administration has led us to accomplish in that one year.

It was at first calculated that we must export to Europe 100,000,000 bushels of wheat. Then the wheat failed which we had expected could be carried to the Allies from other countries. The Food Administration explained the difficulty and asked us to use only two-thirds of our usual amount. By doing so we were able to send to Europe 141,000,000 bushels of the year's

crop. Of beef we had been accustomed to export one or two million pounds a month; but during this year our largest export in any one month was more than 96,000,000 pounds. Our export of pork increased from 50,000,000 pounds a month to 308,000,000 pounds in the month during which we sent most. Before the war, the United States and Canada together were accustomed to send to the countries of the Allies 5 per cent. of their food. During the closing year of the war we sent across the Atlantic eleven and three-fourths million tons of food, that is, 50 per cent., or one-half of their food deficit. This was done "by the willing service of a free people," but some one had to tell us how. Some one had to learn what were the best foods to send, to ascertain how much food was in this country, how much could probably be raised within the year, how much we needed to keep us and the Allies well and strong, how much we wasted, and how much we could save if we tried. We could not wait quietly till a starving country should say, "I need wheat, or meat, or fats;" we must learn the needs of the hungry lands and, just as far as possible, keep a steady stream of supplies flowing to them.

This was not easy. It is true that any one who goes through our markets or sees our wide-spreading fields of grain might fancy that we had food enough for at least one world; but as a matter of fact, we have not, even in ordinary times, so very much more than we ourselves use. Yet the Allies must have their grain,

their meat and other protein foods, their fats and their sugar. We must have ours, too. There would be no fairness in sending our troops "over there" only half fed; and it would take the courage out of the bravest of our soldier boys to know that their families at home were needing food. Here was a puzzle that demanded brains and wisdom, a wide view of every question that might arise, and a big supply of good practical common sense. That is why our Food Administration was organized. Its prime object was to make sure that more food was produced, that it was fairly distributed, and that our soldiers, the Allies, and we ourselves, would have enough to eat. Its aim was not to make food cheap, for if food is too cheap, less will be produced. No one would buy cows, for instance, have all the trouble of feeding and caring for them and disposing of the milk, unless he could count upon a fair profit for his labor. No farmer would plough and plant and cultivate and gather in crops, unless he was reasonably certain that he would receive a fair price for what he had done.

Our wheat crop of 1917 was one-third below the normal quantity, and the Food Administration set to work energetically to see what could be done. In the first place, the Food Administration and the Department of Agriculture worked together—and worked hard—to induce the farmers to plant much wheat. They sent agents through the wheat country to make addresses at granges; they helped the farmers select

the best seed and fight the insects and diseases that might lessen their crop. The newspapers worked loyally and gave up column after column of their valuable space.

But the farmers had a good reason for hesitating. It was possible that the war might come to an end somewhat suddenly, leaving more wheat on hand than would be needed; prices would go down and they would lose. To prevent this, the Government promised them a minimum price of $2.00 a bushel for the crop. The President, however, increased this price to $2.26 a bushel at the Chicago market, whether the war ended in 1918 or not. For this purpose the Food Administration Grain Corporation was formed which became a buyer and seller of grain. It either bought wheat or arranged for its purchase for the Army and Navy, the Allies, and some of the neutral countries that depended upon us for food.

The Food Administration also organized a plan by which the buying for all the Allies was done through one source. To buy a few pounds of meat, for instance, is not difficult, but to buy millions of pounds is a different matter. At first each country bought for itself. Each of the buyers was afraid his own country would go hungry, and they sometimes bid against one another. A better arrangement was now made. Never was so much attention paid to beeves and hogs. Men who knew the meat business through and through decided how much the man or boy who raised the hog ought

to have, how much the packer, how much the storage warehouse, and finally how much the Allies should pay. This plan made sure that every man who had anything to do with the meat should have good pay, but that no one should make exorbitant profits out of the needs of his countrymen or the Allies.

Of course much more food had to be exported from the United States than ever before, nearly twice as much. Could this be done? In an autocracy the ruler could say to his subjects, "Raise more food and eat less," and they would have to obey. All the Allies were rationed; but in a democracy, and especially in a land as large as ours, to enforce such a law would need a whole army of officials and would be exceedingly expensive. Moreover, although it might be done in the cities, it would be almost impossible in the country, where people raise so much of their own food. The Food Administration believed that just as soon as Americans understood the situation, they would "play fair," and would use in their households only a fixed amount of the foods of which we had not a large supply. It explained the situation and asked every American to help.

"Don't waste," it said, "and don't hoard. Even if there is plenty of some one kind of food and you intend to use it very economically, don't store up more than you need at the time. If you do, more will have to be brought for other people, and our railroads have all they can do to bring what is absolutely necessary.

Use food that is nearest and save transportation. Plant a garden and raise your own food."

The people of the United States responded most willingly to these requests. Clubs of all sorts were formed whose object was either to increase the production of food or to save food. There were pig clubs, corn clubs, and canning clubs; there were war gardens and school gardens. Everybody who had a bit of land did his best to raise vegetables to supply his own table and to sell. Long before the war, the Garden City movement began, and now the boys and girls set to work with double energy. Many of them canned their spare produce. In some places these "young citizens" gave a Thanksgiving dinner of their own raising to a group of children who had had no opportunity to make gardens of their own. "And I tell you it was some dinner," said one of the boys enthusiastically.

An even wider movement than the Garden City is the School Garden Army. The name tells in part what it is; but it does not tell that it is recognized by the President of the United States as a real army, which has already more than 1,500,000 enlisted soldiers. "They really will be soldiers, although not old enough to fight," says Secretary Lane. Every "garden soldier," boy or girl, is entitled to wear a little bronze bar with the letters "U. S. S. G. A." on it; and any one can guess what that means. The Army was organized early in the spring of 1918, and in its first season it has produced millions of dollars' worth of food stuffs.

One of the slogans, or rather, the war cries, of this Army is,

> Uncle Sam's in need,
> Pull the weed,
> Plant the seed.

So it was that Americans justified the confidence of the Food Administration and, what is more, they did it good-naturedly. Everybody knows the merry little rhyme beginning:

> My Tuesdays are wheatless,
> My Wednesdays are meatless,
> I'm getting more eatless each day.

The Germans got hold of it and translated it, leaving out the fun, and published it as a bitter complaint of the Americans because of the rapidly increasing shortage of food!

In war time prices always rise, sometimes because for one reason or another there is a smaller supply; but sometimes because the fact that one thing rises is made an excuse for increasing the price of others. Suppose there was only one bicycle in a place and ten boys wanted to buy it. The one who could pay most would be likely to get it. The price of wheat was fixed by Congress. The result was that, while in the Spring of 1917 flour cost $16.75 a barrel wholesale, flour from the 1917 wheat crop was sold at $9.80; and the farmer received a much larger share of the price than the previous year. The Government has re-

quired men who dealt in food for people or animals to any extent to take out a license. If they did not do this, they had to pay a penalty. Dealers who charged more than the lawful price were severely punished by fines or by having their stores closed for a certain number of days or weeks. People who buy in large quantities know what they are paying; but people who buy in small quantities do not always stop to reckon what a barrel of flour would come to if paid for at the rate that they pay for a few pounds. For instance, it was found that a dealer who had been selling flour a few pounds at a time was charging at the rate of $20.00 a barrel. He was punished by being forbidden to open his store till the end of the war. The Government issued licenses to dealers in certain foods, and the Food Administration was sometimes able to control prices by making agreements with those who sold them. During our Civil War, sugar cost at one time thirty and one-half cents a pound wholesale; and it would have surely gone as high as that during this war if the price had not been fixed and dealers forbidden to go beyond it.

The Food Administration kept in touch with all changes of situation and told us what was necessary to be done to meet every emergency. Supposing, for instance, that 100,000 hogs were ready for market and a heavy storm put the railroads in difficulties for a number of days, telegrams flashed over the country would ask people to use less pork. When the railroads were again in running order, there might be for a little time

too much pork for the storehouses and ships; so people were then told that they did not need to do without pork. There were constant changes in the requests of the Food Administration; but this was not because its "forethought came afterward," but because it watched the changing conditions of the country so closely and advised so wisely.

The Food Administration was of course looking out as carefully for us as for the Allies. Our railroads were overwhelmed with war work. They had enough to do in time of peace, but during the war they were called upon to transport ammunition, guns, machinery, food for "over there," all sorts of supplies, and the troops themselves. Each of the countries had to receive, as far as possible, its proper share of the various kinds of food. Even if this food had been safely put up in storehouses, the question would still have been a large one; but when plans had to be made, much of it was still growing in the fields or running about on four legs. The probable amount of it had to be estimated, and crops are rather uncertain things to deal with. Too much rain, too little rain, or some new species of insect may easily make a difference of millions of bushels in the harvest.

Not guns only, but guns and work and food were what won the war. "I'm tired of using substitutes and hearing so much about saving food," said a thoughtless woman; but did it tire her to hear that we were victorious? The Germans hoped that we should all get

"tired of using substitutes" and so help them to win; but that is not the American way.

It is worth remembering:

That in an autocracy one man rules; in a democracy the people rule.

That the work of feeding the Allies fell largely upon North America as the nearest country.

That the Food Administration was formed to make sure of greater production of food and a fair distribution of it.

That under the guidance of the Food Administration our exports of food to Europe were almost doubled; and that this was done "by the willing service of a free people."

With All Able-bodied Men at the Front French Women Have Had to Raise the Crops for Their Homes and Their Armies as Well

CHAPTER XI

WHAT WE HAVE YET TO DO

When the armistice was signed, we promptly celebrated in all sorts of ways. These ranged from long processions and the firing of great cannon to the method of one man who, as a sign of the return of peace and plenty, joyfully dropped into his coffee two lumps of sugar instead of one.

At the very first, most of us thought of nothing except that the war was over and the boys would come home. There would be no more "substitutes," and the sugar bowl would again hold the place of honor on our table. But the more thoughtful among us realized that, although we need no longer fight to free the nations crushed by Germany, we had still to wage a battle with hunger. If you should learn that one person in the house next to your own had died of hunger, it would seem to you a terrible thing. You can hardly imagine the horror of learning that one out of every four among

your neighbors had been starved; but in Poland one person out of every four has died for lack of food; in Serbia one out of every two; and in Armenia more than half of the people have perished of hunger.

Peace has come, but it has not brought food to the hungry. Look at the Hunger Map (see Frontispiece) and remember that every little country on the page is not merely an outline, but represents millions of people who are suffering from hunger. Those still alive in Poland, Roumania, and Serbia, in Armenia and Finland, are starving. So they are in large parts of Russia which were shut off from our help before the Germans were forced to depart from them. Not one country in Europe has food enough to keep its people from going hungry. France, Italy, and the British Isles have not as much as they actually need. Norway, Sweden, Denmark, Holland, Spain, and Portugal have to get on with much less than their usual supply. We have helped to rescue the people of Belgium from starvation, but even the Belgians have had only just enough to save their lives. Surely, the coming of victory ought at least to bring them food enough to make their lives endurable. Then, too, there are the people of Bulgaria, Turkey, and other conquered nations. Many of these will starve unless given help. They have had to make an unconditional surrender, and we are in honor bound to make it possible for them to buy food.

There is another reason why we must send food to Europe. We have sacrificed the lives of thousands of our

men, and we have spent many billions of dollars that the world might be made safe. We are longing for a world of peace and order, a world in which a man shall be free to do his best work under the best conditions. Starving people have little regard for law or the rights of others. Lawlessness spreads rapidly. Two or three selfish, disagreeable boys will spoil a whole playground; and in the same way a few millions of hungry, unhappy, discontented people will spoil a world. To protect ourselves, we must do our best to protect those who are in need of our help. To refuse would be to undo the good work already done.

The people of the hungry countries will do for themselves all that any one could do. They will be saving of food of course; but they must have food to save. They will cultivate the ground, but they must get their ground into proper condition to cultivate. Just imagine trying to make a war garden in a field that had been torn up by shells and shrapnel, a field that was "nothing but a network of holes," as one of the soldiers said. And it is in such fields that hundreds of thousands of people will toil to produce their bread. It is no wonder that they need help.

There is still another difficulty. Many of the men who would have done their best to cultivate these shell-torn fields have been killed or wounded. All who return will be more or less weakened by the long struggle. There will be a shortage of workers, and there will be a vast amount of work to be done. Think what you

would have to do if you had come back to your home after four years of war and had found the house, and perhaps the whole village or city, nothing but a mass of stones and ashes and cinders. Think of coming back to a farm and finding the fields torn up, the buildings burned and the cattle gone Then you will realize what so many people in Europe have to meet, and you will see why they must have good nourishing food and plenty of it in order to reconstruct—to build again—their homes and their lives.

In this splendid work the United States must have a generous part. Now is our opportunity to prove that we are more eager to give than to gain. The people of Europe will do their best, and next autumn they will perhaps be able to provide the greater part of their own food. Meanwhile we must help them as we should wish to be helped if we were in want and there were a great land of plenty just across the ocean.

What we shall need to send will vary from time to time. Wheat will soon be brought to Europe from India and Australia. In less than a week after the signing of the armistice Australian ships were already on the way. Both wheat and meat will come from Argentina. Sugar will come from Java. When there are more refrigerator ships, we can send more meat. Some countries will need more wheat, some more fat, and some more sugar than others. To learn beforehand what kinds of food each will require will be in the hands of the Food Administration; and we shall look to it

for guidance, as we have done ever since it was established.

Many people have questioned, "After the war is over, shall we go back to our old careless, extravagant ways of living? Shall we begin again to leave sugar in the bottom of the cup and fill the garbage can to overflowing? No. Surely, after having once learned a better way, we cannot go back to the old fashion. While we may not need to put substitutes into our bread or to go without meat or to divide our teaspoonfuls into halves and quarters, we shall need to live simply. We shall have plenty of food to keep us well and strong, but we shall not have any to waste—if any of us are so foolish as to desire to waste.

Another part of the work of the Food Administration will be to see that food is properly distributed both here and abroad. The old way of distributing food was to send it wherever the highest price would be paid, and sometimes to destroy it rather than sell it for a more reasonable price. The new way, the way of kindness —and of good sense, too, for that matter—is to send it where it is needed to enable people to do their share of the world's work.

So it is that we willingly bear the burden of aiding our brothers across the sea. Long ago it was said that the United States is

> The hope of all who suffer,
> The dread of all wrong.

We may well be proud of our country because she is powerful; but we love her because she is kind and generous and thoughtful of those who without her help would surely perish.

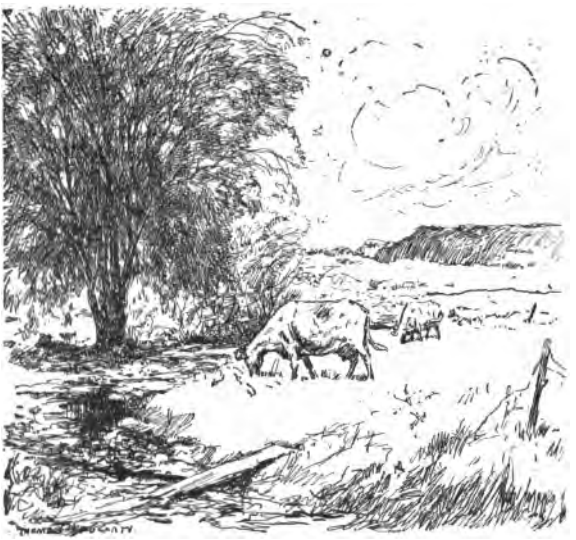
It is worth remembering:

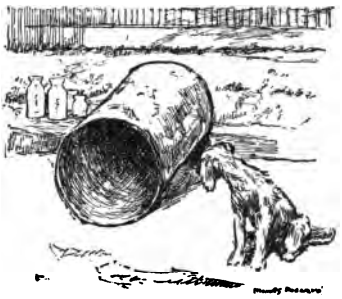
That even the coming of peace has not brought food to the hungry.

That no country in Europe has enough food.

That for the hard work of reconstruction nourishing food will be especially necessary.

That the United States will share generously in providing food for those who are in need.





CHAPTER XII

THE LITTLE GROUP OF ONE

Did you ever notice that when anything is given to a little child, his first thought is to put it into his mouth as fast as he can? When he is a few years older, he is ready to share his good things with his family, and after a while he likes to think that his city or state or his whole country is faring well. Some day perhaps, we shall learn to think of the whole world as one great family, and we shall be glad if we can help even a little in bringing it about that every one has his fair share of the good things of life. That is the deeper meaning of the Food Administration. Its present *work* is to feed hungry nations, but the *meaning* of the work is the "brotherhood of man."

The Food Administration can only "press the button;" we, the people of the United States, must "do the rest." Germany marched forward with a chip on her shoulder and a challenge to knock it off

if we could. The "chip" was a "dare" to keep the Allies from starving, and we helped to do it. Wars used to be won chiefly by bullets, but this war was won by bullets and work and bread. We were obliged to have enormous armies and great factories and food for millions; but after all, it was the little group of one that brought success. One man fired one gun, one man helped make munitions, one man cultivated the ground; that is the way the mighty armies, the great throngs of factory workers, and the countless bands of farmers were formed. We shall never get far beyond the verse that little children sing:

> Little drops of water,
> Little grains of sand,
> Make the mighty ocean
> And the pleasant land.

We could not make a "mighty ocean," but we did help to make the ocean mighty in its freedom for all mankind. We could not make a "pleasant land," but we helped to make all lands pleasant by driving away the robber hordes that sought destruction and ruin.

With the conquered nations we must deal wisely and justly, aiming at what will be for the highest good of the world. We must do our best to help feed and reconstruct the countries that have suffered because of the war.

It is only by "a long pull and a strong pull and a pull all together" that we can do these things. You know the game called the "tug of war," in which half the

boys pull at one end of a rope and half at the other. There is no chance for any one in the middle; everybody must pull one way or the other. That is the way it is now; everybody in America is pulling in one way or the other, either to help the country or to hinder her. Not every one can buy Government bonds or many thrift stamps, but faithful work is just as helpful as money. Not long ago a newsboy carelessly neglected to deliver a paper. The subscriber telephoned to the office; the clerk reported the matter to the head of the delivery department; the head of the delivery department sent another boy by the electric car to deliver the paper. It was quite like "the house that Jack built," and it took the time of the subscriber, the telephone operator, the clerk, the head of the delivery department, and the second boy, and cost two carfares —just because one boy was not faithful. Time and faithfulness are all fully as valuable in this period of constructing the world anew as they were in the days of barrage fire and machine guns.

Did you ever realize what an honor it is to be asked to work for our country? A little child is always pleased if he can feel that he is doing something to help his father or mother. Even a little dog will try his best to understand what his master wants and is delighted if he can do it. Here is a mighty country—wide-spreading, prosperous, and powerful—and she says to every man and woman and to every child, "Will you do something for me?"

Now what can every little group of one do for the country? The Food Administration has shown us some ways in which we can help. We know that every garden helps to produce food to make up for that which has been destroyed or prevented from growing. We know that we ought not to waste even a mouthful of food. On the wartime bill of fare of a luxurious hotel there was printed, "Help us to observe the Gospel of the Clean Plate; please order only what you will eat."

We need this motto just as much now. We must content ourselves with simpler ways of living, and so save not only food, but also gas and coal and time and labor.

Transportation can be saved. If every family could raise all that it eats, the railroads would be immensely relieved. A garden saves transportation, so does buying food from the nearest farmer. So does shopping in your own town or even village instead of going to the nearest large city. Save express and mail. Save man power and the expense of carrying goods from the grocery or market to the house. Our grandmothers, if they happened to live in the country, would have thought it wonderfully convenient if a delivery wagon had called at their doors once a week. But now! "Some people order one-fourth of a dozen cookies in the morning and a yeast cake in the afternoon," said a grocer. To have no deliveries would be exceedingly wasteful, because it would take the time of hundreds

of customers rather than of one or two delivery men; but we can reduce their work by carrying packages home, by never ordering more than once a day, or, even better, once or twice a week, and by trying never to order anything but perishable food just before a Sunday or a holiday. Grocers usually have to employ extra help at such times, and a bit of thoughtfulness on the part of the customers would make this unnecessary.

During the last few years boys here at home have had such chances as boys never had before, because places left vacant by men were given to them. They received high wages, and they had splendid opportunities to rise. But did you ever watch them in working hours? Some of them thought they were big folk just because they had dropped into big places. Others were trying their best to fill the big places. You could almost see at a glance which ones would rise in the world and which ones would never hold such high positions again.

The verses about the hungry little French baby who couldn't be the "hope of France," because he couldn't "get enough food to have a chance," end as follows:

I wish I had a father. If I couldn't have that, then I wish some other babies' fathers would give me a place to stay—
A warm, light place, with persons in it while the Person in Skirts is gone all day.
And maybe they'd give me some food that wasn't as bad as grass tea.
Do you think, if their babies have plenty and some left over, the other babies' fathers would do that for me?

This is what we are trying to do; to feed the children and the grown folks, to help the nations that are at last set free from tyranny and cruelty, and to make the world safe and happy for them and for us.

"I don't believe you know what 'U.S.' means," some one once said teasingly to a very small American boy. The little fellow drew himself up to his full height, looked the man in the eye, and said, "'U.S.' means *us*." We are a firmly united people, striving for the right. We have a big piece of work on hand, but "'U.S.' means us," and with the help of God we will carry it through.

It is worth remembering:

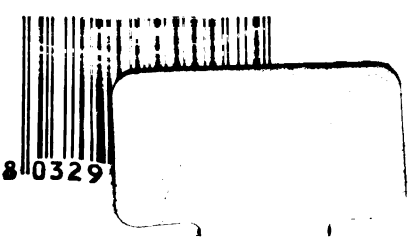
That the work of the Food Administration is to control and to save food so that every one may share it.

That in the work that lies before us each person must either help or hinder.

That it is an honor to be asked to work for our country.

That "'U. S.' means *us*."


Colibrì
Made in Italy


8 0329